

NEW SPECIES AND COMBINATIONS IN *PODACHAENIUM* (ASTERACEAE,
HELIANTHEAE)

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ABSTRACT.

A new species from Chiapas (Reserva El Triunfo), *Podachaenium chiapanum* B. Turner & Panero, is described and illustrated, and the new combination, *P. standleyi* (Steyermark) B. Turner & J. Panero, is made. The latter occurs in Guatemala and has been considered to be synonymous with the Oaxacan species *P. pachyphyllum* (Klatt) S.F. Blake by recent workers. Characters which distinguish these several taxa are listed. Along with the widespread *P. eminens*, the genus now contains four species.

KEY WORDS: Asteraceae, Heliantheae, *Podachaenium*, México

Routine identification of Mexican Asteraceae has occasioned the present paper.

Prior to the transfer of *Calea skutchii* S.F. Blake into *Podachaenium* by H. Robinson (1978), the genus was thought to be monotypic. Jansen *et al.* (1982), however, transferred the latter to the genus *Squamopappus* but, at the same time, transferred into *Podachaenium* another species, *P. pachyphyllum* (including *C. standleyi*), that had long resided in *Calea*.

In the present paper we accept *Podachaenium* as enlarged by Jansen *et al.* (1982), add an additional species *P. chiapanum* to the genus, and resurrect the name *Calea standleyi*, giving it specific status within an expanded *Podachaenium*.

As we currently view the genus, *Podachaenium* contains four species, as keyed, and discussed in the account that follows.

KEY TO SPECIES OF *PODACHAENIUM*

1. Leaves palmately veined, broader than long, or nearly so; widespread. . .
..... *P. eminens*

1. Leaves trinervate from well above the base, or pinnately nervate, 2-4 times as long as broad; Oaxaca, Chiapas, Guatemala. (2)
 2. Stems sparsely pilose to glabrous; involucre bracts ca. biseriate, mostly 3-6 mm long, appressed. (3)
 2. Stems densely and permanently rusty pilose; involucre bracts 3-4 seriate, mostly 6-12 mm long, loose and spreading; Chiapas.
..... *P. chiapanum*
3. Leaves pinnately nervate; petioles mostly 0.5-1.0 cm long; blades elliptic, widest at or near the middle; ray florets ca. 13, the ligules 15-20 mm long. *P. pachyphyllum*
3. Leaves with 3(5) principal nerves; petioles mostly 2-7 cm long; blades ovate to trullate ovate, wider well below the middle; ray florets 8-11, 12-15 mm long; Guatemala. *P. standleyi*

Podachaenium chiapanum B. Turner & J. Panero, *sp. nov.* TYPE: MEXICO. Chiapas: Mpio. Jaltenango, Reserva El Triunfo, 15° 39' N, 92° 48' W, evergreen cloud forests, 2200 m, 12 Jun 1990, *M. Heath & A. Long 956* (HOLOTYPE: TEX).

Podachaenium pachyphylo (Klatt) S.F. Blake similis sed differt caulibus dense persistente ferruginei-pilosis, foliis pinnatinervibus in sicco ferruginei-nigris, capitulescentiis capitulorum 8-10 compositis, pedunculis ultimis 1-5 cm longis dense persistente brevipilosis, capitulis hemisphaericis ca. 4 cm latis trans radios expansos (vs. 1.5-2.0 cm), flosculis radii ca. 21 ligulis plerumque 15-20 mm longis (vs. flosculis radii 13 ligulis 8-10 mm longis).

Shrub or small tree 1.7-3.0 m high. Stems angulate, brownish black, densely and persistently short pilose but glabrescent with age. Leaves drying brownish black, mostly 10-20 cm long, 3-8 cm wide; petioles 1.5-4.0 cm long; blades elliptic-ovate, pinnately nervate, the nerves usually persistently pubescent with appressed rusty hairs, the margins serrate. Heads 10-20, arranged in irregular cymose panicles, the ultimate peduncles mostly 2-5 cm long, densely pilose with persistent rusty red short hairs. Involucres hemispheric, 15-20 mm across, 8-12 mm high, the bracts linear-lanceolate, 3-4 seriate, subequal, loosely imbricate and usually reflexed for about 1/2 their length, rusty red pubescent throughout. Receptacle hemispheric, the bracts persistent, shorter than the florets, the apices mostly obtuse. Ray florets pistillate, fertile, the ligules white, mostly 15-20 mm long, 2-4 mm wide. Disk florets numerous, the corollas yellow, ca. 3 mm long, the tubes ca. 0.8 mm long, sparsely pubescent. Anthers

brownish black. Achenes, those of the ray, 3 sided, 3 awned, those of the disk radially flattened, the body about 2 mm long, pubescent above, the pappus of 2 coarsely hispidulous awns ca. 1.5 mm long, between these 1-4 minute deciduous scales.

ADDITIONAL SPECIMENS EXAMINED: MEXICO. Chiapas: al NW de la Reserva del Triunfo, en el Cerro del Filo, ca. 1980 m, 11 May 1982, *Calzada et al.* 8776 (TEX); Reserva El Triunfo, path to Cerro El Triunfo, 2000 m, Apr 1989, *Heath & Long MA14* (TEX).

Podachaenium chiapanum is distinguished from both *P. pachyphyllum* and *P. standleyi* by a number of characters, as indicated in Table 1.

Podachaenium eminens (Lag.) Sch.-Bip.

This widespread species with its distinctive broad, palmately veined, leaves offers no problem in identification and is not considered further here. Excellent illustrations of the taxon have been provided by Nash (1976) and McVaugh (1984). The long ignored *Podachaenium andinum* E. André (Rev. Hortic. 64:414, 1892.), from the illustrations accompanying its description, appears to belong to *P. eminens*.

Podachaenium pachyphyllum (Sch.-Bip. ex Klatt) Jansen, Harriman, & Urbatsch, Syst. Bot. 7:482. 1982.

Altamirania pachyphylla Greenm.

Aspilia pachyphylla Sch.-Bip. ex Klatt

Aspiliopsis pachyphylla (Greenm.) Greenm.

Calea pachyphylla (Sch.-Bip. ex Klatt) S.F. Blake

Jansen, Harriman, & Urbatsch (1982) have discussed adequately the nomenclatural history of this taxon, noting most of its salient features. The species is known only from northcentral Oaxaca. Jansen *et al.* (1982) included within their concept of this species material from Guatemala which we consider to be sufficiently distinct from *P. pachyphyllum* so as to be recognized as a species, as noted in Table 1, and by the account that follows.

Podachaenium standleyi (Steyermark) B. Turner & J. Panero, *comb. nov.*

BASIONYM: *Calea standleyi* Steyermark, in Standley & Steyermark, Publ. Field Mus. Nat. Hist., Bot. Ser. 22:299. 1940.

Verbesina standleyi (Steyermark) D. Nash.

Table 1. Comparison of characters.

<i>P. pachyphyllum</i>	<i>P. chiapanum</i>	<i>P. standleyi</i>
1. Stems: glabrescent	densely pilose	glabrous
2. Leaf blades: trullate ovate widest below middle mostly with 3 principal nerves glabrous drying green	ovate trullate widest near middle pinnately nervate persistently pubescent along veins beneath drying rusty black	elliptic widest near middle pinnately nervate glabrous drying green
3. Petioles: ca. 1 cm long	1-2 cm long	2-7 cm long
4. Capitulescence: heads 15-30 15-30 cm across	heads 10-20 8-10 cm across	heads 15-30 15-40 cm across
5. Peduncles (ultimate): glabrescent	persistently rusty pilose	sparsely white pilose to glabrate
6. Heads: globose ray florets ca. 13 8-10 mm long	hemispheric ray florets ca. 21 15-20 mm long	± globose ray florets 8-11 12-15 mm long
7. Involucres: 3-4 mm high bracts biseriata appressed	6-8 mm high bracts 3-4 seriate loose and spreading like the rays	3-6 mm high bracts biseriata appressed
8. Disk Achenes: glabrous or nearly so	markedly coarsely hispid above	glabrous



Fig 1 *Podachaenium chiapanum*, from holotype

The type of this taxon is from Guatemala: Dept. San Marcos, between Todos Santos and Finca El Porvenir, Volcán Tajumulco, 1300-3000 m, 1 Mar 1940, *Steyermark 37004* (HOLOTYPE: F!). Jansen *et al.* (1982) also examined the holotype but thought it not sufficiently distinct from *P. pachyphyllum* so as to be distinguished.

In addition to the holotype we have examined five other collections of *Podachaenium standleyi*, all from the Department of San Marcos, as follows (*Steyermark 36277, 36359, 36341; Williams et al. 26269, 27189* - all these at F). The most obvious differences that distinguish *P. standleyi* from *P. pachyphyllum* are the leaves, the former having trullate to ovate leaves with three principal nerves, being widest well below the middle, the petioles mostly 2-7 cm long (vs. elliptical and pinnately nervate with petioles 1-2 cm long). Additional differences are listed in Table 1. On total characters, however, *P. standleyi* appears to stand somewhat closer to *P. pachyphyllum* than it does to *P. chiapanum*.

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